Active virtual guides as an apparatus for augmente based telemanipulation system on the Internet

Otmane, S. Mallem, M. Kheddar, A. Chavand, F.
CEMIF Syst. Complexes, Evry Univ., France;

This paper appears in: **Simulation Symposium, 2000. (SS 2000) Proceed Annual**

Meeting Date: 04/16/2000 - 04/20/2000
Publication Date: 16-20 April 2000
Location: Washington, DC USA
On page(s): 185 - 191
Reference Cited: 12
Number of Pages: x+338
Inspec Accession Number: 6590013

Abstract:
In many current teleoperation architectures, remote tasks are indirectly perfo human operator (HO) by means of a virtual environment consisting in a virtu symbolic representation of the remote site. In order to achieve virtual tasks, t interaction of the HO and the virtual representation is monitored. Monitoring r subsequently translated into a sequence of instructions sent to the remote rol actual execution. This paper focuses on different strategies designed to allow friendly operator interaction with the virtual representation in order to achiev remote tasks via the Internet. The use of active virtual **guides** to assist the H performing simple or complex tasks with enhanced performance (speed, prec safety) is also discussed. Techniques such as virtual reality (VR), **augmentec** (AR) combined with Internet-based programming facilities are investigated as proposed teleoperation system named ARITI (acronym for **Augmented Reali** for Telerobotic applications via Internet)

Index Terms:
Internet **augmented reality** human factors telerobotics user interfaces ARITI Int virtual **guides** **augmented reality** human operator monitoring remote robot remot telemanipulation system teleoperation architectures telerobotics user-friendly operat virtual reality

h eee e eee g e ch ch b c be be